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-	518	705/26 and (mobile or portable) same (internet or web)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/05/19 10:02
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-	331	(705/26 and (mobile or portable) same (internet or web)) and wireless	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/05/19 10:03
-	99	((705/26 and (mobile or portable) same (internet or web)) and wireless) and ((705/26 and (mobile or portable) same (internet or web)) and merchant)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/05/19 10:03

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Second sight: how mobile phones can take over the internet

Victor Keegan
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If he were alive today Guglielmo Marconi would be rubbing his eyes in disbelief. Almost 100 years since he sent the first wireless signals across the Atlantic his technology has been re-invented to bring the internet to a mass audience.

During the next few weeks, the first of the much vaunted WAP (wireless application protocol) mobile phones - providing customised access to the internet - will be rolled out in Britain and elsewhere. For several years a debate has raged over whether the internet would reach critical mass by marrying the personal computer or the television set. But all the time it was having an affair with the mobile phone, which now looks set to be consummated.

Why? Because PC access to the internet is still a minority sport - and likely to remain so. Distribution through television has social limits (half the family can't watch Coronation Street while the rest enjoy multi-player gaming). But sales of mobiles are still exploding, and, as yet more people come online, the greater is the incentive for others to join because of the effects of being on a network.

If you have any doubts, look at Finland, which leads the world in mobile phone usage. Some 90% of youngsters have phones (and some families have more than 100% penetration). It is already changing the way people react with each


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other, reviving tribal instincts as people communicate in groups.

Critics argue that the five-line screen of a typical WAP phone cannot cope with the oceans of data on the net. On the contrary, far from being killed by information overload, the internet phones will provide an antidote to it.

Instead of choosing from dozens of sources of news or services, those that suit you can be beamed to you on demand. The huge potential demand for customised usage will breed a new generation of service providers and coders. If you want to get ahead, start learning WML (wireless mark up language), the language used to customise internet data for mobiles.

At first the applications look predictable - news, football results, share prices, home banking and so forth. But imagine what will happen when clever programmers start writing applications for one of the biggest mass markets ever. Already Phone.com, a leader in net access for WAP phones, claims access to 13,000 third party developers devising applications for corporate and personal users. Goodness knows what they will come up with.

In recent weeks I have seen prototypes of some of the new phones providing news about anything from who is in pole position in the Formula 1 Grand Prix to a 'live' map of the main route around Paris showing which sections are congested and which are not - a service already available via French company Alcatel, one of the very few already operating banking services by phone.

The weaknesses of the early models are obvious: problems include the size and visibility of the screen and speed of access. But what shouts out at you is the potential. After a couple of years, these WAP phones will be joined by the 'third generation' of phones, for which the government announced an auction of bandwidth last week. These will offer broadband (high capacity) access to an (almost) worldwide standard.

Manufacturers will make them in all shapes, weights and sizes to ascertain

what the market wants. All you need to do now is to think what will be possible when all the leading edge technologies converge with the mobile phone.

It could have a screen capable of watching live video conferencing or films, a tiny web camera so you can be seen live by the person (or group) you are talking to. A tiny global positioning device will pinpoint where you (or your children) are. It could inform you of restaurants and places of interest in areas you are passing through. Voice recognition technology will enable you to 'speak' your emails or (much easier) have text messages read to you. The Walkman and MP3 music players will surely be gobbled up by the web-linked phone.

You will be able to peek at any web camera in the world from wherever you are, and those cameras will breed like rabbits as they fall even further in size and price. You could look at traffic densities ahead on the motorway, check your aged parents are OK at their home, link it to your cash card for payments, monitor your own home's security, see who is ringing your front door bell while you are on a beach in the south of France, eavesdrop on a lecture at a university if it has installed cameras (and why not?) or consult your GP remotely about that throat infection ('Please hold the camera up to your mouth and say Ah').

None of this is fanciful because all of these uses are available now. It is quite likely that wireless will become our principal method of communication.

The interesting thing is that Europe still has a clear technological lead over the US. We have a much more advanced 'mobile culture' and a standardised (GSM) infrastructure for phones to talk to each other (while the US has competing systems).

It is interesting how Europe - despite a blaze of publicity - has failed to sign up all its member states to a single currency, but, with very little publicity, has standardised its wireless infrastructure. There is no doubt in my mind which is the more important.